



**INFORMATION DISCLOSURE STATEMENT
BY APPLICANT Sheet 1 of 10**

Docket No. P8228-US-NP

Applicant: Alexander T. Garthwaite
 Serial No: 10/644,344
 Filed: August 20, 2003
 For: HANDLING FUTILE COLLECTIONS IN THE TRAIN ALGORITHM THROUGH
SELECTIVE EXTENSION OF THE COLLECTION SET
 Examiner: Safet Metjahić
 Art Unit: 2171

U.S. PATENT DOCUMENTS

Exam Inits	Cite No.	Patent Number	Kind Code	Patentee or Applicant Name	Issue Date
WJH	10	10/287,851		GARTHWAITE, ET AL.	11/5/02
		20020032719	A1	THOMAS, ET AL.	03/02
		20020095453	A1	STEENSGAARD	07/18/02
		20020133533	A1	CZAJKOWSKI, ET AL.	09/19/02
		20040039759	A1	DETLEFS, ET AL	2/2004
		4,724,521	B1	CARRON, ET AL.	2/1988
		4,797,810	B1	MCENTEE, ET AL.	01/10/89
		4,912,629	B1	SHULER, JR.	05/27/90
		4,989,134	B1	SHAW	01/29/91
		5,088,036	B1	ELLIS, ET AL.	02/11/92
		5,333,318	B1	WOLF	07/26/94
		5,392,432	B1	ENGELSTAD, ET AL.	02/21/95
		5,485,613	B1	ENGELSTAD, ET AL.	01/16/96
		5,560,003	B1	NILSON, ET AL.	09/24/96
		5,687,370	B1	GARST, ET AL.	11/11/97
		5,801,943	B1	NASBURG	09/01/98
		5,845,276	B1	KIRSCH, ET AL.	12/01/98
		5,845,298	B1	O'CONNOR, ET AL.	12/01/98
		5,857,210	B1	TREMBLAY, ET AL.	01/01/99
		5,873,105	B1	TREMBLAY, ET AL.	02/16/99

FOREIGN PATENT DOCUMENTS

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MAS		5,900,001	B1	WOLCZKO, ET AL.	05/04/99
		5,903,900	B1	KNIPPEL, ET AL	05/11/99
		5,930,807	B1	EBRAHIM, ET AL.	07/27/99
		5,953,736	B1	O'CONNOR, ET AL.	09/14/99
		6,021,415	B1	CANNON, ET AL.	02/01/00
		6,047,125	B1	AGESEN, ET AL.	04/04/00
		6,065,020	B1	DUSSUD	05/16/00
		6,098,089	B1	O'CONNOR, ET AL.	08/01/00
		6,148,310	B1	AZAGURY, ET AL.	11/14/00
		6,173,294	B1	AZAGURY, ET AL.	01/09/01
		6,185,581	B1	GARTHWAITE	02/06/01
		6,226,653	B1	ALPERN, ET AL.	05/01/01
		6,243,720	B1	MUNTER, ET AL	06/05/01
		6,289,358	B1	MATTIS, ET AL.	09/11/01
		6,308,185	B1	GRARUP, ET AL.	10/23/01
		6,314,436	B1	HOULDSWORTH	11/06/01
		6,321,240	B1	CHILIMBI, ET AL.	11/27/01
		6,353,838	B1	SAUNTRY, ET AL.	03/05/02
		6,381,738	B1	CHOI, ET AL.	04/30/02
		6,393,439	B1	HOULDSWORTH, ET AL.	05/21/02

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Exam Inits	Cite No.	Cy	Number	Kind Code	Patentee or Applicant Name	Publication Date	T
MJH		WO	WO0188713	A2	SUN MICROSYSTEMS, INC.	11/22/2001	<input type="checkbox"/>
		EP	EP 0 904 055	A1	SUN MICROSYSTEMS, INC.	9/8/1999	<input type="checkbox"/>
		EP	EP 0 969 377	A1	INT'L BUSINESS MACHINES CORP.	1/5/2000	<input type="checkbox"/>
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WAT		APPEL, "Simple Generational Garbage Collection and Fast Allocation", Software Practice and Experience, 19(2), 1989, 171-183	<input type="checkbox"/>
		APPEL, ET AL., "Real-Time Concurrent Collection on Stock Multiprocessors", ACM SIGPLAN Notices, 1988	<input type="checkbox"/>
		APPLEBY, KAREN, "Garbage Collection for Prolog Based on WAM, Vol. 31, Issue 6", Communication of the ACM, June 1, 1998, 719-741	<input type="checkbox"/>
		ARORA, ET AL., "Thread Scheduling for Multiprogrammed Multiprocessors", Proceedings of the 10th Annual ACM Symposium on Parallel Algorithms and Architecture, June 1998	<input type="checkbox"/>
		BACON, ET AL., "Java without the Coffee Breaks: A nonintrusive Multiprocessor Garbage Collector", SIGPLAN Conference on Programming Language Design and Implementation, June 2001, Snowbird, UT	<input type="checkbox"/>
		BAKER, "List Processing in Real Time on a Serial Computer", Communications of the ACM 21, April 1978, 280-294	<input type="checkbox"/>
		BARRETT, ET AL., "Using Lifetime Predictors to Improve Memory Allocation Performance", SIGPLAN'93 Conference on Programming Languages Design and Implementation Vol. 28(6) of Notices, June 1993, 187-196, ACM Press, Albuquerque, NM	<input type="checkbox"/>
		BLACKBURN & MCKINLEY, "In or Out? Putting Write Barriers in Their Place", June 20, 2002, Berlin	<input type="checkbox"/>
		BROOKS, "Trading Data Space for Reduced Time and Code Space in Real-Time Garbage Collection on Stock Hardware", Proceedings of the 1984 ACM Symposium on Lisp and Functional Programming, August 1984, 108-113, Austin, TX	<input type="checkbox"/>

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**INFORMATION DISCLOSURE STATEMENT
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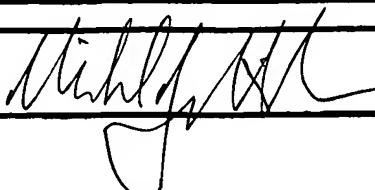
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MMH		CHILIMBI, ET AL., "Using Generational Garbage Collection to Implement Cache-Conscious Data Placement", International Symposium on Memory Management, October 1998	<input type="checkbox"/>
		CLARK, "An Efficient List-Moving Algorithm Using Constant Workspace, Vol. 19 No. 6", Communications of the ACM, June 1976, 352-354	<input type="checkbox"/>
		CLARK, ET AL., "Compacting Garbage Collection can be Fast and Simple", Software-Practice and Experience, Vol. 26, No. 2, February 1996, 177-194	<input type="checkbox"/>
		COURTS, "Improving Locality of Reference in a Garbage-Collecting Memory Management System", Communications of the ACM, Vol. 31, No. 9, September 1988, 1128-1138	<input type="checkbox"/>
		FLOOD, ET AL., "Parallel Garbage Collection for Shared Memory Multiprocessors", USENIX JVM Conference, April 2001	<input type="checkbox"/>
		GOLDSTEIN, ET AL., "Lazy Threads: Implementing a Fast Parallel Call, Vol. 37, No. 1", Journal of Parallel and Distributed Computing, August 1996, 5-20	<input type="checkbox"/>
		GRARUP, ET AL., "Incremental Mature Garbage Collection", M.Sc.Thesis @ http://www.daimi.aau.dk/jacobse/Papers , August 1993	<input type="checkbox"/>
		HANSON, "Fast Allocation and Deallocation of Memory Based on Object Lifetimes", Software Practice and Experience, January 1990, 20(1):5-12	<input type="checkbox"/>
		HARRIS, "Dynamic Adaptive Pre-Tenuring", In Proceedings of the Int'l Symposium on Memory Management, October 2000, 127-136	<input type="checkbox"/>

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<i>MTJ</i>		HERLIHY, ET AL., "Lock-Free Garbage Collection for Multiprocessors", ACM SPAA, 1991, 229-236	<input type="checkbox"/>
		HOLZLE, URS, "A Fast Write Barrier for Generational Garbage Collectors", Workshop on Garbage Collection in Object Oriented Systems, October 1993	<input type="checkbox"/>
		HOSKING, ET AL., "Remembered Sets Can Also Play Cards", OOPSLA/ECOOP Workshop on Garbage Collection in Object-Oriented Systems, October 1993	<input type="checkbox"/>
		HOSKING, ET AL., "Protection Traps and Alternatives for Memory Management of an Object-Oriented Language", Object Systems Laboratory, December 1993, 1-14, Dept. of Comp. Sci., Amherst, MA	<input type="checkbox"/>
		HUDSON, ET AL., "Adaptive Garbage Collection for Modula-3 and Small Talk", OOPSLA. ECOOP '90 Workshop on Garbage Collection in Object-Oriented Systems, October 27, 1990	<input type="checkbox"/>
		HUDSON, ET AL., "A Language - Independent Garbage Collector Toolkit", Coins Techincal Report, September 1991	<input type="checkbox"/>
		HUDSON, ET AL., "Incremental Collection of Mature Objects", Proceedings of the Int'l Workshop on Memory Managment, 1992, Pgs. 1-16, Springer-Verlag	<input type="checkbox"/>
		HUDSON, ET AL., "Training Distributed Garbage: The DMOS Collector", University of St. Andrews Tech Report, 1997, 1-26	<input type="checkbox"/>
		HUDSON, ET AL., "Garbage Collecting the World: One Car at a Time", ACM SIGPLAN Notices 32, 1997, 162-175	<input type="checkbox"/>

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**INFORMATION DISCLOSURE STATEMENT
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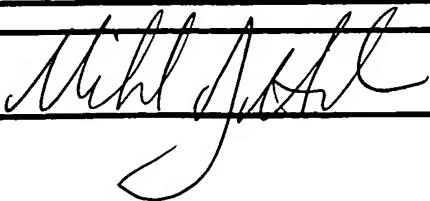
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MTJH		HUDSON, ET AL., "Sapphire: Copying GC Without Stopping the World", Practice and Experience Special Issue, Date Unknown, JAVA/Grande/Iscope	<input type="checkbox"/>
		JONES AND LINS, "Garbage Collection: Algorithms for Automatic Dynamic Memory Management", 1996, 165-179, John Wiley and Sons, NY	<input type="checkbox"/>
		LIEBERMAN, ET AL., "A Real-Time Garbage Collector Based on the Lifetimes of Objects", Communications of the ACM, 1983, 26(6)	<input type="checkbox"/>
		LISKOV, ET AL., "Partitioned Garbage Collection of a Large Stable Heap", Proceedings of IWOOOS, 1996, 117-121	<input type="checkbox"/>
		MOON, "Garbage Collection in a Large Lisp System", Conference Record of the 1984 ACM Symposium on LISP and Functional Programming, August 1984, 235-246, Austin, TX	<input type="checkbox"/>
		MOSS, ET AL., "A Complete and Coarse-Grained Incremental Garbage Collection for Persistent Object Stores", Proceedings 7th Int'l Workshop on Persistent Object System, 1996, 1-13, Cape May, NJ	<input type="checkbox"/>
		MUNRO, ET AL., "Incremental Garbage Collection of a Persistent Object Store using PMOS", 3rd Int'l Workshop on Persistence and Java, 1998, 78-91, Tiburon, California	<input type="checkbox"/>
		NETTLES, SCOTT, "Real-Time Replication Garbage Collection", Avionics Lab, Wright Research and Development Center, 1993, PDDI	<input type="checkbox"/>
		PADOPOLOUS, "Hood: A User-Level Thread Library for Multiprogramming Multiprocessors, Thesis: The Uni. of TX", University of Texas, August 1998, 1-71, Austin	<input type="checkbox"/>

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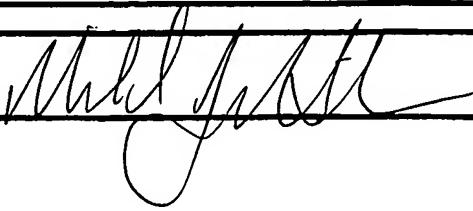
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WAT		ROY, ET AL., "Garbage Collection in Object-Oriented Databases Using Transactional Cyclic Reference Counting", VLDB Journal - The International Journal on Very Large Data Bases, Vol. 7, Issue 3, 1998, 179-193	<input type="checkbox"/>
		SELIGMANN, ET AL., "Incremental Mature Garbage Collection, In the European Conference on Object-Oriented Programming", M.Sc.Thesis @ http://www.daimi.aau.dk/jacobse/Papers/ , 1995	<input type="checkbox"/>
		SHUF, ET AL., "Exploiting Profilic Types for Memory Management and Optimizations. ACM ISBN 9/2/01", POPL, January 2002, Portland	<input type="checkbox"/>
		SOBALVARRO, "A Lifetime-based Garbage Collector for LISP Systems on General-Purpose Computers", Department of Electrical Engineering and Computer Science at MIT, September 1988, AIRR-1417	<input type="checkbox"/>
		STAMOS, "Static Grouping of Small Objects to Enhance Performance of a Paged Virtual Memory", ACM Transactions on Computer Systems, Vol. 2, No. 2, May 1984, 155-180	<input type="checkbox"/>
		UNGAR, "Generation Scavenging: A Non-Disruptive High Performance Storage Reclamation Algorithm", ACM SIGPLAN Notices, April 1984, 19(5)	<input type="checkbox"/>
		UNGAR, ET AL., "Tenuring Policies for Generation-Based Storage Reclamation", ACM SIGPLAN Notices, 1988, 23(11)1-17	<input type="checkbox"/>
		VENNERS, "Garbage Collection, Inside the Java 2 Virtual Machine; Chapter 9", www.artima.com , Date Unknown, parts 1-18	<input type="checkbox"/>
		WILSON, "Uniprocessor Garbage Collection Techniques", Proceedings of Int'l Workshop on Memory Management, 1992, V. 637	<input type="checkbox"/>

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WAT		WILSON, "Uniprocessor Garbage Collection Techniques", Technical Report, University of Texas, 1994	<input type="checkbox"/>
		WITHINGTON, P.T., "How Real is "Real-Time" GC?", Symbolics, Inc., October 6, 1991, Burlington, MA	<input type="checkbox"/>
		ZEE, ET AL., "Write Barrier Removal by Static Analysis", OOPSLA '02, November 2002	<input type="checkbox"/>
		ZORN, "Segregating Heap Objects by Reference Behavior and Lifetime", In 8th Int'l Conferenceon Architectural Support for Programming Languages and Operating Systems, October 1998, 12-32, San Jose, CA	<input type="checkbox"/>
		ZORN, BENJAMIN, "Barrier Methods for Garbage Collection", Dept. of Computer Science, Uni. of Colorado, November 1990, 1-37, Boulder	<input type="checkbox"/>
		AZAGURY, ET AL., "Combining Card Marking With Remembered Sets: How to Save Scanning Time", ACM SIGPLAN Notices, October 1998, V. 34(3), ACM Press, Vancouver, Canada	<input type="checkbox"/>
		CHENEY, "A Nonrecursive List Compacting Algorithm, Volume 13, Number 11", Communications of the ACM, November 1970, 677-678, Uni. Math. Lab., Cambridge, European Patent Office	<input type="checkbox"/>
		CHENG, ET AL., "Generational Stack Collection and Profile-Driven Pretenuring", SIGPLAN'98 Conference on Programming Languages Design and Implementation, June 1998, 162-173, ACM PRESS, Montreal, Canada	<input type="checkbox"/>
		HOSKING, ET AL., "A Comparative Performance Evaluation of Write Barrier Implementations", OOPSLA; ACM Conference on Object-Oriented Systems, Languages and Applications, October 1992, V. 27(10), ACM Press, Vancouver, Canada	<input type="checkbox"/>

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<i>MT</i>		LAM, ET AL., "Object Type Directed Garbage Collection to Improve Locality", Proceedings of the International Workshop on Memory Management, September 1992, 404-425, St. Malo, France	<input type="checkbox"/>
		LAM, ET AL., "Effective Static-Graph Reorganization to Improve Locality in Garbage Collected Systems", Proceedings of ACM SIGPLAN Conference on Programming Language Design and Implementation, June 1991, Toronto, Canada	<input type="checkbox"/>
		PIRINEN, PEKKA, "Barrier Techniques for Incremental Tracing", Harlequin Limited, Date Unknown, 20-25, Cambridge, Great Britain	<input type="checkbox"/>
		WILSON, ET AL., "Effective Static-Graph Reorganization to Improve Locality in Garbage Collected Systems", Proceedings of ACM SIGPLAN Conference on Programming Language Design and Implementation, June 1991, Canada	<input type="checkbox"/>
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